

Coronavirus casts shadow on missile tests at Odisha's Integrated Test Range

With India restricting travellers from foreign countries, scientists from Israel and Russia had to stay back in their respective countries leading to deferment of both the tests

By Hemant Kumar Rout

Bhubaneswar: The threat of novel coronavirus has cast a shadow on flight testing of at least two missiles that have been developed by India in collaboration with Russia and Israel.

Defence sources said the missiles were scheduled to be test fired from the Integrated Test Range (ITR) off Odisha coast. With India restricting travellers from foreign countries, scientists from Israel and Russia had to stay back in their respective countries leading to deferment of both the tests till the situation normalises.

One of the most happening laboratories of DRDO, the ITR has four launching complexes at Chandipur and Abdul Kalam Island. Apart from ITR, the DRDO has one more unit - Proof and Experimental Establishment (PXE) at Chandipur. Though activities have not been hampered, restrictions have been imposed on movement of staff in groups.

"As the foreign scientists and technical staff remain present during test of missiles developed as joint ventures, the tests have been postponed. Though the trials of indigenously developed missiles will be conducted as per schedule, nothing has been planned this month," the sources informed.

The ITR and PXE have issued guidelines for their scientists and other staff on prevention of coronavirus infection. As part of precautionary measures, bio-metric attendance has been stopped and priority is being given on complete sanitisation of surfaces frequently used by staff members.

ITR Director BK Das said a 20-point charter has been prepared by a high-level committee headed by a senior scientist for management of different on-going projects. "We have completely avoided meeting together and discussion are being done through video-conferencing. All negotiations on finalisation of tenders will be done through Skype," he said.

The ITR chief has also decided to shut down the canteen store department (CSD), where employees gather to buy groceries and other essentials, from Friday till March 31. A squad has been formed to ensure that the staff are using all protective gears inside the lab.

"Since ours is one of the biggest labs in the world, we can not shut it down completely. But we have cancelled non-essential training and conferences. Employees have been directed to avoid public transport. In case of any issue, they can take leave and stay back at home," he added.

Though scientists from Russia, Israel, France and Denmark usually visit the test range for different activities, luckily no one from these countries had come here as there was no mission scheduled in the last two months.

<https://www.newindianexpress.com/states/odisha/2020/mar/19/coronavirus-casts-shadow-on-missile-tests-at-odishas-integrated-test-range-2118966.html>

HAL cuts its profit on Tejas Mark 1A deal by 50%, fighter jets to take to sky by 2022

Defence Ministry Wednesday gave green signal to the purchase of 83 Light Combat Aircraft Mark 1A Tejas from the Hindustan Aeronautics Limited at a cost of Rs 37,000 cr

By Snehesh Alex Philip

New Delhi: The defence ministry Wednesday cleared the much-awaited deal for the purchase of 83 Light Combat Aircraft (LCA) Mark 1A Tejas from the Hindustan Aeronautics Limited (HAL) for a surprisingly low amount of Rs 37,000 crore as against the original value of the deal, which was pegged at around Rs 50,000 crore.

These 83 jets will come with more enhanced capabilities than the earlier 40 Tejas ordered by the Indian Air Force (IAF). These enhanced capabilities include not just better weapon systems but also mid-air refueling and Active Electronically Scanned Array (AESA) radar.

This is the largest defence order placed by the Narendra Modi government under the 'Make in India' initiative.

"While orders of 40 Tejas aircraft had been placed with HAL in initial configurations, DAC (Defence Acquisition Council) paved the way for procurement of 83 of the more advanced Mark 1A version of the aircraft from HAL by finalising the contractual and other issues," according to a statement by the defence ministry.

"The proposal will now be placed for consideration of Cabinet Committee on Security (CCS). This procurement will be a major boost to 'Make in India' as the aircraft is indigenously designed, developed and manufactured with participation of several local vendors apart from HAL," the statement added.

The first LCA Mark 1A aircraft will be delivered to the IAF 36 months from the date of the contract.

ThePrint takes a look at how the Tejas Mark 1A will enhance the IAF's capabilities.

16 aircraft to be delivered every year

Defence sources told ThePrint if a contract is signed in the next three months, then the first flight of the Tejas Mark 1A will take place by the end of 2022 and the first squadron would be completed by 2024.

According to the plan, 16 aircraft are to be delivered every year.

"The relevant infrastructure has been put in place to ramp up the production to 16 aircraft per year. Once the contract is signed, work on procurement of supplies will start and the production will be geared up," HAL sources said.

Significant works on the jets have been outsourced by HAL to companies like Larsen and Toubro (L&T), Dynamatic Technologies and Alpha Design.

The wings will be manufactured by L&T, while front fuselage has been outsourced to Dynamatic Technologies and the middle section to VEM. The rear section of the fighter has been outsourced to Alpha Design.

Contract likely to be inked next fiscal year

Defence sources said the actual contract for the Mark 1A Tejas is likely to be signed only in next fiscal year, starting 1 April.

This, sources said, was because the process of CCS clearance will take time and the fund allocation would be done through the new budget, which comes into effect from 1 April.

While initially the IAF wanted major capability enhancement in the Tejas and was looking at a significantly different aircraft LCA Mark 2, the Aeronautical Development Agency (ADA), the DRDO and HAL proposed the LCA Mark 1A in 2015.

So while the ADA focuses on the Tejas Mark 2, which falls in the category of a medium weight fighter, the IAF will induct the Mark 1A Tejas to deal with a depleting squadron strength.

The current squadron strength stands at 30 as against the sanctioned strength of 42.

Better equipped

The 83 Tejas Mark 1A will be significantly better than the 40 Tejas Mark 1 that the IAF has ordered. They are already in the process of being manufactured and inducted into the IAF.

The significant difference between Mark 1 and Mark 1A Tejas is that the latter will be equipped with the Israeli Active Electronically Scanned Array (AESA) radar instead of the manually-scanned Elta EL/M 2032 radar, also Israeli.

While work is in progress on an indigenous AESA radar, Uttam, which is currently undergoing trials, the initial lot of the Tejas Mark 1A will come equipped with the Israeli technology.

The new Tejas will also have a Self-Protection Jammer (SPJ) on a pod under the wing.

Two other upgrades include improving the “maintainability” of the fighter and equipping it with external refuelling capability to allow it to cover a longer distance.

The Mark 1A will also be able to fire a variety of Beyond Visual Range (BVR) missiles and close combat air-to-air missiles. Sources also said the jets will be equipped with Vympel R-73 CCMs and a Derby BVR missile.

Efforts are also on to integrate the Brahmos NG with the jets.

Why the fall in price

The big fall in price from an estimated Rs 50,000 crore to just about Rs 37,000 crore is a direct result of a juggling exercise by the IAF, which cut down on its demand list, including spares, logistics support and other issues.

Also, the HAL was directed to cut down its earlier projected profit of 12 per cent to a little over 6 per cent.

These efforts led to a decrease in the price at a time the military is facing a huge budget challenge amid cash crunch.

<https://theprint.in/theprint-essential/hal-cuts-its-profit-on-tejas-mark-1a-deal-by-50-fighter-jets-to-take-to-sky-by-2022/383730/>



Fri, 20 March 2020

Make in India: OFB, DRDO to develop fully indigenous Futuristic Infantry Combat Vehicle in 3-5 years

Tentatively named Mark I, the vehicle will help modernise Indian Army's infantry frontier which currently relies on BMP II, an infantry personnel carrier with a 30 mm gun

By: Yash Shukla

New Delhi: Make in India boost for Indian Army: A fully indigenous Futuristic Infantry Combat Vehicle (FICV) is being developed by Ordnance Factory Board (OFB) and Defence Research Development Organisation (DRDO) for the use of the Indian Army. Tentatively named Mark I, the

vehicle will help modernise Indian Army's infantry frontier which currently relies on BMP II, an infantry personnel carrier with a 30 mm gun. The joint collaboration between the Ordnance Factory Board and the DRDO will yield results in a period of three to five years, PTI reported.

Advanced features which were at the drawing board stage will now be included in the FICV, OFB chairman Hari Mohan was quoted as saying. He also said that DRDO and OFB, which were earlier working separately on the project, decided to join forces to develop the project. Mohan further said that the specifications and features of the project will keep advancing as it is an evolving project. When the project attains a satisfactory stage in tune with the feedback of Indian Army officials, the factory will begin production of the infantry vehicle, he said.

Terming the name of the infantry vehicle tentative, Mohan said that Mark I will be ready in 3-5 years whereas its sequel Mark II can take up to a decade in its development. In accordance with the Make in India initiative of the Modi government, most of the parts to be used in the production will be developed in India barring some minor sub-systems, Mohan informed.

With enhanced firepower, the vehicle will boast of an auto-grenade launcher with a range of 1,500 metres, an OFB official was quoted as saying in the report. It will also include an anti-tank guided missile capability which can fire missiles within a range of 4000 metres with automatic command, the official added. A gun control system linked with a thermal imager fire control is another big ticket feature that makes the FICV highly advanced, the official said.

Upbeat with an increase in defence exports in recent years, OFB has set a target of exports worth Rs 500 crore a year in the next two to three years. OFB exported products worth Rs 240 crore last year in comparison to Rs 15-20 crore mark it registered in the preceding years, the OFB chairman said.

<https://www.financialexpress.com/defence/make-in-india-ofb-drdo-to-develop-fully-indigenous-futuristic-infantry-control-vehicle-in-3-5-years/1901907/>



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IAF to buy aerial fuses and twin-dome simulators for Hawk Mk32

The Defence Acquisition Council (DAC) has given approval to procure equipment for the Indian Air Force's (IAF) Hawk Mk32 jet trainer aircraft.

The locally made defence equipment will cost Rs13bn (\$174.5m) and includes aerial fuses and twin-dome simulators for the aircraft.

The Indian Ministry of Defence (MoD) said in a statement: "The DAC has accorded approval for acquisition of indigenous defence equipment for about Rs1,300 crore (\$174m).

"The proposals were for procurement of Aerial Fuses and Twin-Dome Simulators for Hawk Mk32 aircraft for the IAF."

In addition, the DAC has cleared the proposed procurement of 83 advanced Mk1A version of Tejas aircraft for the IAF. The contractual details have also been finalised.

The light combat aircraft (LCA) Tejas supersonic combat fighter is designed by Aircraft Development Agency (ADA) under the Defence Research and Development Organisation (DRDO).

Manufactured by Hindustan Aeronautics Limited (HAL), the procured equipment will be a significant capability boost for the IAF. HAL will also maintain the aircraft.

The proposal now awaits approval from Cabinet Committee on Security (CCS).

The MoD added: “This procurement will be a major boost to ‘Make in India’ as the aircraft is indigenously designed, developed and manufactured with participation of several local vendors apart from HAL.” The ministry noted that orders have been placed with HAL for 40 Tejas aircraft in initial configurations.

<https://www.airforce-technology.com/news/iaf-aerial-fuses-twin-dome-simulators-hawk-mk32/>